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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,457	07/05/2001	Scott A. W. Muirhead		2701
27572	7590	10/15/2003		EXAMINER
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303				HECKENBERG JR, DONALD H
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 10/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/898,457	MUIRHEAD, SCOTT A. W.	
	Examiner	Art Unit	
	Donald Heckenberg	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1,3 and 4 is/are allowed.
- 6) Claim(s) 2 and 5-8 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 05 July 2001 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The priority data at the beginning of the specification needs to be updated to reflect that the parent application, U.S. Ser. No. 09/377,792, has issued as U.S. Pat. No. 6,294,114.

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

The original application contained only claims numbered 1 and 6. Claims 2-5 were apparently filed in the priority application (U.S. Ser. No. 09/377,792), however no such claims were filed with the instant application. Accordingly, claim 6 is actually the second filed claim. Thus, misnumbered claims 6-12 have been renumbered as 2-8, and will be referred to as such in the rest of this action.

3. Claim 8 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the

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claim, or amend the claim to place the claim in proper dependent form, or rewrite the claim in independent form.

Claim 7 (from which claim 8 depends) recites "[t]here sheets of thermoplastic material are united between thermoform tooling to provide a triple sheet article, the thermoforming tooling comprises..." Although claim 7 begins by reciting an operation, the specific reference to "a thermoforming tooling comprising..." has been interpreted as intending to be an apparatus claim.

Claim 8 begins by reciting "[t]he thermoforming tooling of claim 7[.]" Claim 8 then recites that "the first, second and third margin sections cross link to characterize an over lapping seam; and the first, second and third outer adjacent sections are removed from the first, second, and third intended article sections at the over lapping seam to provide a unitary article of three united thermoplastic sheets." Written as such, this claim only defines limitations directed to the use of the thermoforming apparatus recited in claim 7. The intended use of the apparatus is not germane to issue of patentability. In re Casey, 370 F.2d 576, 580 152 USPQ 235, 238 (CCPA 1967); In re Otto, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Therefore, claim 8 fails to further limit claim 7.

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4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 2 and 7-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Shuert (U.S. Pat. No. 5,843,366; previously of record).

Shuert discloses a thermoforming tooling. The apparatus comprises molds (50, 52, 56, and 58) mounted on platens (48 and 54) at a work station (32). One of the molds (56) co-acts with another of the molds (52) in a first thermoforming operation, and then the mold (56) co-acts with the other of the molds (50) in another thermoforming operation. The platens and molds are moved in and out of compressed relation to shape the material being worked upon (see figures 3 and 5). A slide assembly mounted on the work station is used for independently moving the molds into overlying relations for the thermoforming operation (see figure 2).

Claims 2 and 7-8 all recite that the thermoforming tooling is to be used in a three sheet thermoforming operation. As noted above, the intended use of an apparatus is not germane to the

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issue of patentability of the apparatus claims. Shuert discloses a thermoforming tooling with all of the apparatus features claimed, and therefore anticipates these claims.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shuert.

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Shuert discloses a thermoforming apparatus. The apparatus comprises upper and lower platens (48 and 54) supported for vertical movement (see figure 3). A first mold (50) is mounted on the upper platen. The apparatus is further provided with a mold shuttle system, with second and third molds (56 and 58) mounted for horizontal movement on the shuttle system (see figure 2). A controllable actuation means selectively moves the second and third molds horizontally on the mold shuttle system into an engaging position upon the platen for vertical movement thereon (cl. 8. 11. 46-52). The apparatus must inherently a frame structure supporting the thermoforming apparatus.

In reverse of the claimed combination, Shuert shows the apparatus to be configured as such that the first mold is mounted on the upper platen, and the mold shuttle system acts upon the lower platen. However, it would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the apparatus of Shuert as such to have reversed the configuration of the apparatus as such to have the first mold mounted on the lower platen and have the mold shuttle system acting upon the upper platen because such an arrangement would amount to a mere shifting location of parts which would not otherwise effect apparatus operation. Further, such an arrangement would not require the modification of any of

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the other apparatus parts. Note, generally the shifting in the location of parts of an apparatus that otherwise does not effect apparatus operation does not amount to a patentable invention.

In re Japikse, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shuert in view of Chun et al. (U.S. Pat. No. 5,814,185; previously of record).

Shuert discloses the thermoforming apparatus as described above. Shuert further discloses the upper and lower platen (48 and 54) to be moved vertically by the use of hydraulic rams (60 and 62). Shuert does not disclose a plurality of gear posts, platen gears, and drive motors for moving the platens.

Chun discloses a thermoforming apparatus. A plurality of gear posts (18A and 18B) are supported on the frame of the apparatus vertically adjacent to the platens (12 and 14). The apparatus uses drive motors (20A and 20B) for driving gears (30), with the gears engaging the gear posts to thereby cause movement of the platens (see cl. 2, ll. 57-67). Chun notes the system further comprises a control system for moving the platens (cl. 3, ll. 1-3).

It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to have modified the

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apparatus of Shuert as such to have used gear posts, gears, driving motors, and control system to move the platens because this is an alternative mechanism known in the art that adequately moves the platens in thermoforming operations as suggested by Chun.

10. Claims 1 and 3-4 are allowed.

11. The following is a statement of reasons for the indication of allowable subject matter:

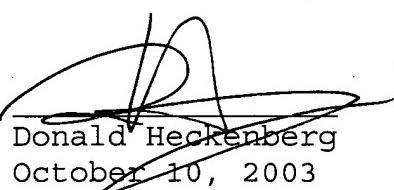
The prior art of record fails to teach or suggest an apparatus with the combination of features recited in claims 1 and 3. The closest prior art disclosed by Shuert is described above. While Shuert discloses four work stations and an indexing wheel for rotating a clamp frame with the material to be worked upon between the work stations, Sheurt does not disclose the apparatus as having three spaced ovens for heating the thermoplastic sheets. Moreover, it does not appear as though three oven could be integrated into the arrangement of Sheurt because each of the three non-oven work stations (28, 32, and 34) already has a structure necessary for the disclosed process. Note, in claim 1 of the instant application, lines 6-7 reciting "said work stations one, two and three including an oven for

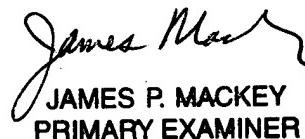
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heating the thermoplastic sheets to a thermoformable temperature" has been interpreted to mean that each of the work stations includes an oven, such that the apparatus comprises three ovens.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald Heckenberg whose telephone number is (703) 308-6371. The examiner can normally be reached on Monday through Friday from 9:30 A.M. to 6:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker, can be reached at (703) 308-0457. The official fax phone number for the organization where this application or proceeding is assigned is (703) 972-9306. The unofficial fax phone number is (703) 305-3602.


Donald Heckenberg
October 10, 2003


JAMES P. MACKEY
PRIMARY EXAMINER

10/14/03